

### REMARKS

Applicant appreciates the consideration shown by: (1) Examiner Tai in an interview on July 2, 2009, during which the non-final nature of the Office Action mailed June 24, 2009 was confirmed; and (2) Examiners Tai and Michener during the telephone interview of July 28, 2009, during which the rejections made in the June 24th Office Action were discussed in detail. Although no agreement was reached, Applicant presents the foregoing amendments to the claims in an effort to advance prosecution of this application toward allowance in light of the Examiners' comments.

Firstly, Applicant resolves the Section 112 rejection by amending claim 3 to define the "annular space" noted by the Examiner as being expressly described in the specification. Hence, it is believed that the rejection should be withdrawn. Claim 7 is also canceled without prejudice. Clarifying amendments are also made to several of the claims without adding any new matter.

Turning to independent claim 1, it requires a "tribocharging" rotor "having a generally non-permeable outer surface for contacting and frictionally charging the particles." In contrast, in both Altman and Ebert, no frictional charging of any particles created by any "tribocharging rotor" having such a surface is described or created. Rather, the electrodes of Altman 19 (or 25) and Ebert 24 serve to create an electric field potential that serves to "repel" the particles and actually prevent them from contacting the electrode. *See, e.g.*, Ebert, col. 3, lines 41-44 (stating that the particles are "attracted to and eventually deposited on the collecting electrode" 14) and Altman, col. 5, lines 21-23 (stating that electrode 19 "serves to charge the particles entrained in the separation vessel 11 and to repel charged particles toward the separation walls" and that, as a result, "entry of particles into the separator core [22] is prevented." (emphasis added). The unsupported contention that an errant particle might contact the electrode(s) in these

devices and become frictionally charged is speculation that cannot support a proper obviousness rejection. Indeed, according to the Court of Customs and Patent Appeals:

Where the legal conclusion [of obviousness] is not supported by the facts it cannot stand . . . . The Patent Office has the initial duty of supplying the factual basis for its rejection. ***It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.*** To the extent the Patent Office rulings are so supported, there is no basis for resolving doubts against their correctness. Likewise, we may not resolve doubts in favor of the Patent Office determination when there are deficiencies in the record as to the necessary factual bases supporting its legal conclusion of obviousness . . . .

*In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173 (CCPA 1967). Given the lack of any factual basis for concluding that the electrodes of Altman or Ebert contact or frictionally charge particles, the obviousness rejections based on these references cannot stand.

With respect to the use of functional language appearing in certain of the claims, Applicant further notes that it is permissible to claim the invention structurally or functionally. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429 (Fed. Cir. 1997) (“[a] patent applicant is free to recite features of an apparatus either structurally or functionally” (citing *In re Swinehart*, 439 F.2d 210, 439 F.2d 210, 212, 169 USPQ 226, 228 (CCPA 1971) (“[T]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims.”). Regardless of this functional construct, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” MPEP § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Hence, the requirements for tribocharging, contact, and frictional charging of particles cannot simply be disregarded in the patentability analysis.

Applicant further emphasizes the need for evidentiary support for a reason for combining two references in making a rejection under 35 U.S.C. Section 103(a). Indeed,

U.S. Supreme Court precedent recognizes that the ability to “merely demonstrat[e] that each of its elements was, independently, known in the prior art” is insufficient to establish obviousness. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (U.S. 2007) (holding that obviousness cannot be proven **“merely by demonstrating that each of its elements was, independently, known in the prior art . . .”**) (emphasis added). Rather, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements.” *Id.* Furthermore, the “reason” must have a rational underpinning, and must be articulated in the record. *Id.*

In this instance, the Examiner’s proposed basis for combining the references is “to create homogenous high electrostatic field for better charging particles.” Respectfully, that such a combination would result in “better charging particles” is mere speculation without any factual support in the record. In other words, there is no evidence that rotating the electrode 19 or 25 of Altman would result in “better charging” of the particles. Even if such result might occur from the combination, this would still not lead a skilled artisan to provide a tribocharging rotor that contacts and frictionally charges the particles, as claim 1 requires.

Claim 22 recites a limitation in “means plus function” form; namely, “rotatable means for frictionally charging the particles.” As Applicant noted in a previous response, proper examination thus requires an evaluation of the structures disclosed in the specification for performing the recited function, as well as findings that the prior art not only performs the recited function, but also does so using identical or equivalent structures to those described in the Applicant’s specification. *See* MPEP § 2181 (“the ‘broadest reasonable interpretation’ that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.”). If the prior art does not perform the

identical function recited, or does so using non-identical or non-equivalent structures, then a proper rejection cannot lie. *McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001 (Fed. Cir. 2001) (“in the context of a means-plus-function claim, the . . . prior art must disclose not simply a means for achieving the desired function, but rather the particular structure recited in the written description corresponding to that function, or an equivalent thereof.” (citing *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1849 (Fed. Cir. 1994))).

Although the Examiner rejects this claim based on Altman, no finding is made that this reference discloses any structural that performs the identical function of “frictionally charging particles,” let alone discloses the corresponding structure from Applicant’s specification for performing it. Furthermore, the Examiner’s contention that, in Altman, “particles rub against the electrode surface and particles will be frictionally charged” constitutes mere speculation that cannot sustain an obviousness rejection. *See In re Warner, supra*. Thus, a *prima facie* case of obviousness is lacking for claim 22.

With respect to independent claim 30, neither Ebert nor Altman discloses “a separator downstream of the chamber outlet for separating at least one species of the charged particles from the particle mixture in the fluid flow.” The same is true for dependent claims 11 and 29, which also recite a separator for this purpose. Indeed, for the reasons previously stated, these references are both considered “non-analogous” to the problem solved by the present invention and otherwise outside of the present inventor’s field of endeavor. For at least these reasons, Applicant submits that claim 30 is not obvious in view of Altman or Ebert, and should be allowed.

Finally, Applicant presents new independent claim 33 for consideration, which is in “Jepson” format. Neither Altman nor Ebert disclose the claimed environment including a feedstream of a particle mixture including at least two species of particles and an electrostatic separator for separating at least one species of particles from the mixture.

Rather, both are from the non-analogous field of “scrubbing” particles for cleaning gases. Accordingly, these references cannot provide a proper basis for rejecting new claim 33 as “obvious.”

In light of the foregoing, it is now believed that all pending claims are allowable. To the extent questions remain, the Examiner is invited to call the undersigned representative. *If any fees are due, the undersigned authorizes their deduction from deposit account number 11-0978.*

Respectfully submitted,

**KING & SCHICKLI, PLLC**

A handwritten signature in black ink, appearing to read 'Andrew D. Doristo', is written over the firm name.

Andrew D. Doristo  
Registration No. 41,713

247 North Broadway  
Lexington, KY 40507-1058  
(859) 252-0889